IT Unit 3

Topic 2

# Ch 3, Data Analytics: Drawing Conclusions, Part 2

**Digital systems**, 165-170

**Digital systems** (Informatics, p 165)

1. What are the components of an information system?

* People, processes, a network and hardware & software,

1. What is a digital system?

* Hardware, software, transmission medium and people that work collectively to become a digital system.

1. Define hardware. Give some examples.

* Hardware is made up of **input hardware**, which enables users to input data or provide commands to software, **output hardware**, which gives information to the user, **storage hardware,** which stores data and software, and **communication hardware**.
* Examples of input hardware include things such as a keyboard, mouse, trackpad and touch screens.

1. What are the most common types of output hardware?

* Soft copy and hard copy, which relate to viewing on screen (soft copy) and a printed copy of that data is the hard copy.

**Storage, p 167**

1. Distinguish between primary and secondary storage.

* **Primary**- refers to short-term storage or what we know as RAM or volatile.
* **Secondary**- refers to long-term storage such as disk drives.

1. Describe the characteristics of the following storage devices:
   1. Hard disk drive, HDD

* They are aluminium disks densely crammed with magnetically recorded bits of 1 and 0 (binary code).
* Spinning at up to 10 000RPM, so they can store and retrieve data at incredible speed, with accuracy and reliability.
* Very cheap per megabyte of capacity
  1. Solid state drive, SSD
* Non-volatile memory similar to USB flash drives and SD cards
* Run silently, start instantly, generate less heat and use less electricity
* Have no motors that will age and eventually fail
* Stores less data per square centimetre of storage space
  1. Network-attached storage, NAS
* It’s a networked team of HDDs in a box
* Makes file sharing easier
* Increases capacity considerably
* Offers data protection, such as hot-swap disks
* Convenient and reliable

Networks and communication, p 168

1. List the different types of network and communication hardware.

* Ports
* Modems
* Switches
* Routers
* Cables
* Wireless access points

**Software, p 169**

1. Define software.

* Software is the programming code that controls hardware.

1. Distinguish between:
   1. Application software

* Is made to do work for the user and create information e.g. word processor
  1. System software
* Made to control hardware and allocate computer resources so application software can run e.g. device drivers of an operating system.
  1. Utility software
* Made to provide a single, specific service to extend the functionality of a digital system e.g. text editor.